

Malted

A.D. 1884, 23rd OCTOBER. N° 14,053.

RECORDED

An Improvement or Improvements in the Manufacture of Bread
and Biscuits.

PROVISIONAL SPECIFICATION.

I THOMAS FLETCHER of N° 97 Great Hampton Street Birmingham in the County of Warwick Baker and Confectioner do hereby declare the nature of the said Invention for "AN IMPROVEMENT OR IMPROVEMENTS IN THE MANUFACTURE OF BREAD AND BISCUITS" to be as follows:—

- 5 My invention refers principally to bread and has for its object to produce bread of an agreeable flavour not liable to become hard and easy of digestion. My invention is also applicable to biscuits.

- In making bread according to my invention I proceed as follows. In the first stage of the manufacture of bread that is in the production of what is technically called "sponge" I proceed in the ordinary way but in the second stage of the manufacture that is in the production of "dough" I substitute an infusion of malt made as hereinafter described for the water ordinarily employed at that stage. The said infusion of malt consists essentially of a solution of diastase. The said diastase has no action on the constituents of the dough until the dough is baked.
- 15 The heat of the baking causes the diastase to act on the starch of the flour producing more or less saccharine matter which communicates an agreeable flavour to the bread and causes it to retain moisture. The bread is consequently not so liable to become dry and hard as ordinary bread. The action of the diastase on the gluten and starch of the flour renders them more easy of digestion than the gluten and
- 20 starch of ordinary bread.

- The infusion of malt I employ is made as follows. I take crushed or ground malt (preferably pale dried malt) and digest it for about three hours in water at a temperature preferably of about one hundred degrees of Fahrenheit's thermometer. The digestion may however be effected in cold water but in that case it should
- 25 extend over four or five hours.

In applying my invention to the manufacture of biscuits I proceed in the ordinary way excepting that in place of water I substitute the infusion of malt hereinbefore described.

My invention is applicable to unfermented bread as well as to fermented bread.

- 30 Dated this twenty-third day of October 1884.

W. T. WHITEMAN,
Agent for the Applicant.

Fletcher's Improvements in the Manufacture of Bread and Biscuits.

COMPLETE SPECIFICATION.

I THOMAS FLETCHER of N° 97 Great Hampton Street, Birmingham in the County of Warwick, Baker and Confectioner do hereby declare the nature of my Invention for:—"AN IMPROVEMENT OR IMPROVEMENTS IN THE MANUFACTURE OF BREAD AND BISCUITS" and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement:—

My invention refers principally to bread and has for its object to produce bread of an agreeable flavour, easy of digestion and not liable to become dry and hard. My invention is also applicable to biscuits.

In making bread according to my invention I proceed as follows. In the first stage of the manufacture of bread, that is, in the production of what is technically called "sponge" I proceed in the ordinary way but in the second stage of the manufacture, that is, in the production of "dough" I substitute an infusion of malt made as hereinafter described for the water ordinarily employed at that stage. The said infusion of malt consists essentially of a solution of diastase. The said diastase has no action on the constituents of the dough until the dough is baked. The heat of the baking causes the diastase to act on the starch of the flour producing more or less saccharine matter which communicates an agreeable flavour to the bread and causes it to retain moisture. The bread is consequently not so liable to become dry and hard as ordinary bread. The action of the diastase on the gluten and starch of the flour renders them more easy of digestion than the gluten and starch of ordinary bread.

The infusion of malt I employ is made as follows. I take crushed or ground malt (preferably pale dried malt) and digest it for about three hours in water at a temperature preferably of about one hundred degrees of Fahrenheit's thermometer. The digestion may however be effected in cold water but in that case it should extend over four or five hours.

In applying my invention to the manufacture of biscuits I proceed in the ordinary way excepting that in place of water I substitute the infusion of malt herein before described.

My invention is applicable to unfermented bread as well as fermented bread.

Having described the nature of my said invention I will proceed to describe the manner in which the same is to be performed.

In making the solution of diastase which I employ I prefer to use one pound of crushed or ground malt (preferably pale dried malt) to one gallon of water.

I digest the malt in the water preferably at a temperature of one hundred degrees of Fahrenheit's thermometer not less than three hours. Cold water may be employed but in that case the digestion should last four or five hours.

I do not however limit myself to the above proportions of the water and malt as a stronger or weaker infusion of malt may be employed but whatever strength of the malt infusion is employed I prefer to use it in such quantity that to every twenty pounds of flour employed the infusion obtained by treating one pound of malt shall be added. The quantity of water required in making bread varies from three to four quarts to twenty pounds of flour or meal according to the quality of the flour or meal and the character of bread to be made. But whatever the quantity of water used I prefer to employ to every twenty pounds of flour the diastase contained in one pound of malt.

In making ordinary or fermented bread according to my invention I make the "sponge" in the ordinary way but in making "dough" from the said "sponge" I employ an infusion of malt instead of water the said infusion preferably containing the diastase obtained from one pound of malt to every twenty pounds of

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flour or meal. The completion of the manufacture of fermented bread is effected in the ordinary way.

Where from the quality of the flour used and the kind of bread to be made only about three quarts of water are employed to twenty pounds of flour the malt infusion may have the strength hereinbefore indicated but where about four quarts of water are used to twenty pounds of flour a weaker infusion of malt may be employed. Although the proportions of diastase and flour I have indicated I believe to be the best yet a greater or less proportion of diastase may be employed.

10 In making unfermented bread according to my invention I mix with the flour or meal four ounces of bicarbonate of soda and eight ounces of bitartrate of potash or cream of tartar to every twenty pounds of flour; or in place of these I mix with the flour or meal any of the mixtures or compounds called baking powders which in the process of the making and baking of the bread will give off carbonic acid gas or other innocuous gas or vapour which will give the required porosity to the bread. I do not limit myself to the quantities above indicated of bicarbonate of soda and bitartrate of potash but I have found the above proportions answer well in practice. In completing the manufacture of unfermented bread according to my invention I proceed as in the ordinary method of manufacture excepting that in making the flour into dough I employ an infusion of malt instead of water, the said infusion having preferably the strength hereinbefore indicated, that is, the infusion of one pound of malt being used to each twenty pounds of flour.

In applying my invention to the manufacture of biscuits I proceed as in the ordinary method of manufacture excepting that in place of water I employ an infusion of malt preferably in the proportion hereinbefore indicated.

My invention is applicable to the manufacture of fermented and unfermented bread and biscuits both from dressed flour that is flour from which the constituents of the cuticle of the wheat grains have been wholly or in part separated, and from wheat meal, that is, meal or flour containing all the constituents of the wheat grains.

The use of an infusion of malt or solution of diastase in the manufacture of bread and biscuits has great advantages over the use of malt meal. When bread and biscuits are made of malt meal the flavour of the bread or biscuits is affected by the flavour of the malt which is not the case when an infusion of malt is employed and the colour or whiteness of the bread and biscuits made from dressed flour is not injured as occurs when malt meal is employed. Further, malt meal contains a considerable amount of insoluble and indigestible matter and in consequence bread made with it produces discomfort in some persons.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is of:—"An improvement or improvements in the manufacture of bread and biscuits":—The use of an infusion of malt or an aqueous solution of the diastase of malt in substitution of or in part in substitution of the water ordinarily employed in making bread and biscuits substantially as hereinbefore described.

45 Dated this Fifteenth day of January 1885.

THOMAS FLETCHER.

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